

# The Identification of *Crocodylus siamensis* Schneider

(Figures 1-2)

*Crocodylus siamensis* has in past years been depleted in numbers to the point of near extinction, largely due to uncontrolled hide-hunting. Few specimens ever find their way into museum or zoological collections. No living specimens were available for examination during a series of studies to determine the species identification of commercial crocodilian hides [King and Brazaitis, 1971, Zool., 56(2): 15-70], or for studies on the identification of living crocodilians (Brazaitis, in prep.). Recent acquisitions of a number of juvenile examples of this species to the collections of the New York Zoological Society (= NYZS) now make these examinations possible.

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## DISCUSSION

The key morphological character, upon which the identification of *Crocodylus siamensis* is based, involves the presence of a median longitudinal bony ridge located on the interorbital region of the skull (Fig. 1). Secondary characters such as dentition, scutellation, and skull conformation are not determinate in themselves [Boulenger, G. A. 1889, Catalogue of the Chelonians, Rhynchocephalians and Crocodiles in the British Museum, London, n.e.: 273-298; De Rooij, N. 1915, The reptiles of the Indo-Australian archipelago. Vol. 1, Lacertilia, Chelonia, Emydosauria. E. J. Brill Ltd., Leiden: 333-339; Smith, M. A. 1931, The Fauna of British India. Reptilia and Amphibia. Vol. 1, Loricata, Testudines. Taylor and Francis, London: 32-48; Taylor, E. H. 1970, Univ. of Kansas Sci. Bull., 49(3): 87-179; Wermuth, H. 1953, Systematik der Rezenten Krokodile. Mitteil. Zool. Mus., Berlin, 29(2): 375-514]. Although useful in the identification of adult whole specimens, such a character is of no value in determining the identification of headless

hides. Similarly the interorbital longitudinal ridge is either lacking entirely or obscure on live juvenile animals, and therefore of little value.

A more reliable character, readily visible on living or preserved *Crocodylus siamensis* and their hides, regardless of size, includes the small scales immediately surrounding the cloacal vent and their continuation caudad in a median line through and beyond the first three subcaudal tail whorls (Fig. 2).

## METHOD

At least one specimen, but usually more, of each of the 27 species and subspecies of crocodilians (excepting *Caiman crocodilus apaporiensis*) were examined for comparative purposes. The identification of all of the *C. siamensis* was additionally confirmed by other morphological characteristics (Wermuth, 1953).

Two groups, totaling 14 live juvenile *C. siamensis*, were compared. The first group of nine individuals received on August 16, 1971 (NYZS 71379, 71380, 71381, 71382, 71383, 71384, 71385, 71386, 71387) was composed of two with cloacal scales extending caudad along a median line through the first four subcaudal tail whorls. Four extended through five subcaudal whorls, and three examples extended through six whorls.

The second group of five juvenile individuals arrived on October 6, 1971, having been shipped from a dealer in Thailand (NYZS 71544, 71545, 71546, 71547, 71548). Of these, two displayed cloacal scales extending through the first six subcaudal tail whorls, while three others respectively extended through their fourth, fifth, and seventh whorls.

No other crocodilian examined was found to bear scales surrounding the cloacal vent which extended in a line caudad beyond the first subcaudal tail whorl.

## SUMMARY

All crocodilians bear a series of small scales which surround the cloacal vent. However, only in *Crocodylus siamensis* Schneider do these scales extend caudad in a median longitudinal line through the first three subcaudal tail whorls or beyond; clearly visible on skins and living or preserved specimens of any size. A longitudinal bony ridge is usually evident in the interorbital region of the skull of adult individuals.

PETER BRAZAITIS, Department of Herpetology, New York Zoological Society, Bronx, New York 10460.

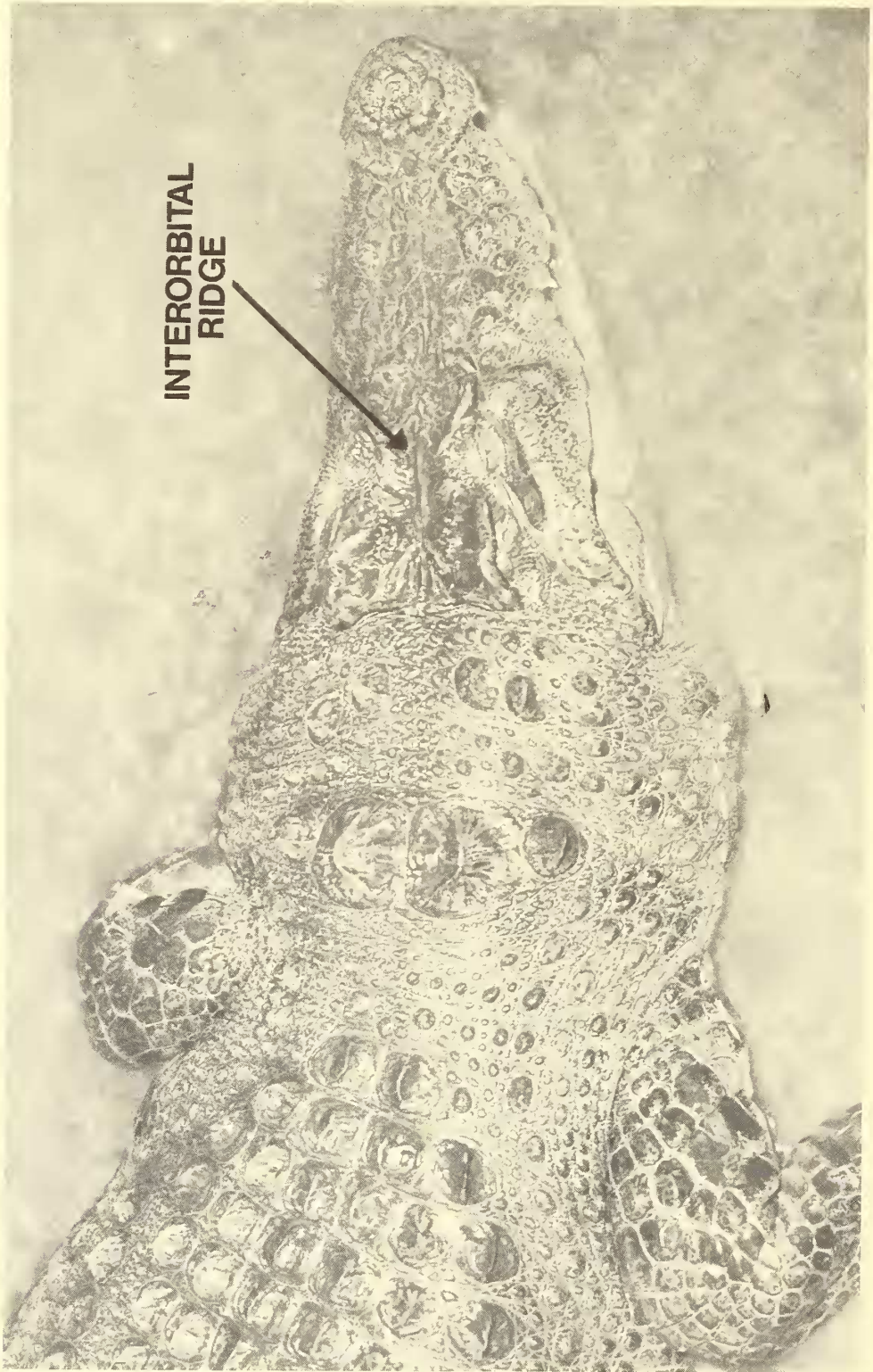
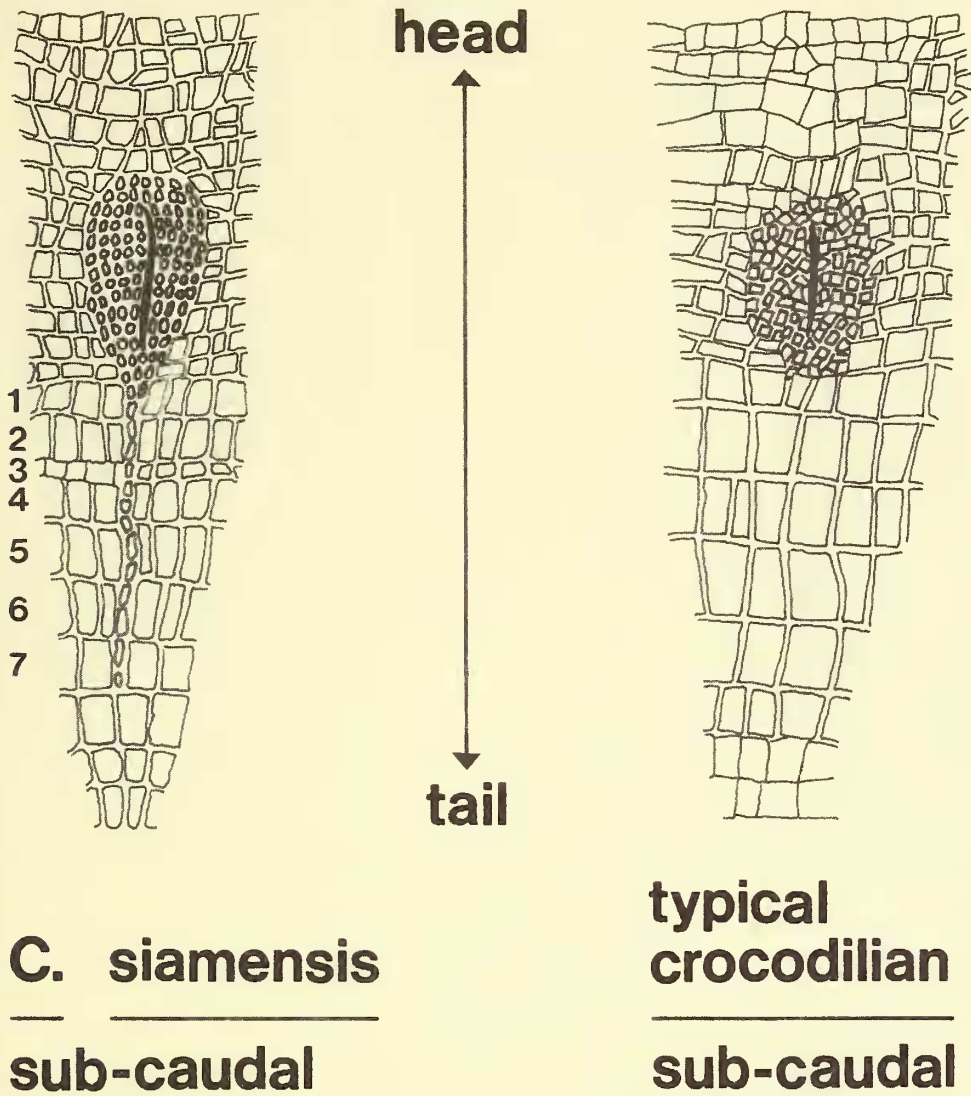


FIGURE 1 indicates the interorbital ridge characteristic of adult *Crocodylus siamensis*.



**fig. 2**

FIGURE 2 compares the subcaudal scale arrangements of *Crocodylus siamensis* to that of a typical crocodilian.